

THE FEMALE OF *BERTRANA HIEROGLYPHICA*
PETRUNKEVITCH
(ARANEAE, ARGIOPIDAE)

BY ARTHUR M. CHICKERING
Museum of Comparative Zoology

Four species of this very interesting genus are known at the present time. Keyserling (1884) established the genus and described the first known species from a group of females from Peras, Brazil. Two other species have been described from South America by Simon (1893); one of these was from Peru and the other from Para, Brazil. Dr. Petrunkevitch was the first to describe a male which was the only specimen in the genus collected at the Wilcox camp on the San Lorenzo River. I now have about five dozen specimens from various parts of Panama and the Canal Zone with both sexes well represented. I have thought it worth while to publish a description of the female with very brief attention paid to the male.

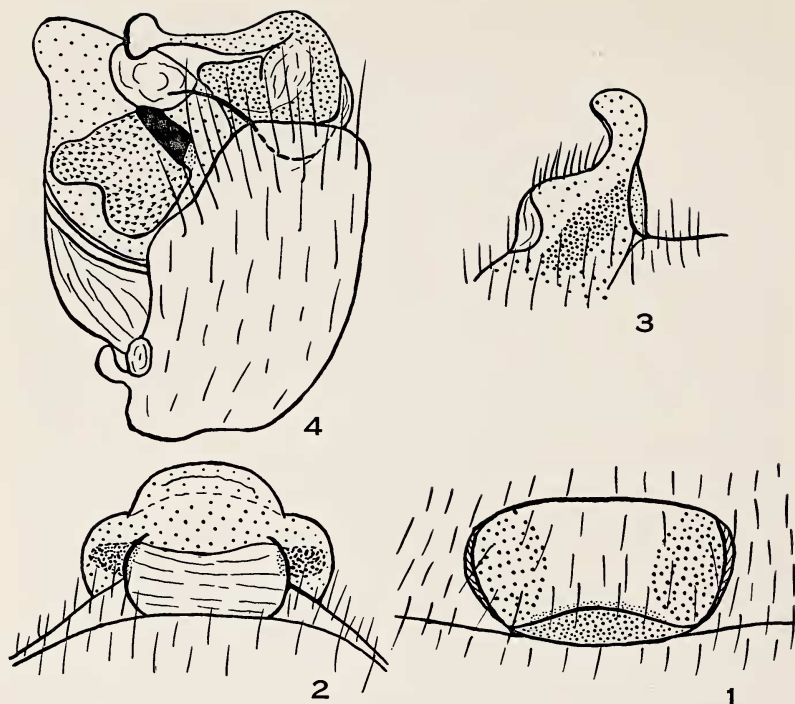
Genus *Bertrana* Keyserling, 1884

Bertrana hieroglyphica Petrunkevitch, 1925

Female. Total length 3.5 mm. Carapace 1.7 mm. long; .97 mm. wide opposite second coxae where it is widest; .44 mm. tall opposite second coxae where it is tallest; rises gently from PME to tallest region and then slopes directly to posterior border with a shallow concavity on the posterior declivity; lateral cephalothoracic grooves fairly distinct; with median fovea no more than a narrow groove; considerably overlapped by the globular abdomen.

Eyes. Eight in two rows. Viewed from above, anterior row strongly recurved, posterior row gently so. Viewed from in front, posterior row definitely procurved, anterior row slightly so; all measured by centers. Central ocular quadrangle wider in front than behind in ratio of about 5 : 4; wider in front than long in ratio of about 25 : 22. Ratio of eyes AME : ALE : PME : PLE = 8 : 6 : 7.5 : 6.5. AME separated from one another by about 1.5 times their diameter, from ALE by slightly more than their diameter. PME separated from one another by two thirds of their diameter, from PLE by slightly more than 5/3 of their diameter. Laterals separated from one another by about one third of the diameter of ALE. Height of clypeus equal to about three fourths of the diameter of AME.

Chelicerae. Basal segment about .49 mm. long; moderately robust; quite normal in general form; fang normal and regularly curved; the



Figs. 1-4. External Anatomy of *Bertrana hieroglyphica*. 1-3. Epigynum from below, in posterior view, and in profile from right side, respectively. 4. Tarsus of right palp of male.

promargin of the fang groove has three teeth the first of which is relatively large; the retromargin has a total of six teeth the first of which is relatively large, then three more smaller and close together follow together with two very small ones to complete the series; very minute tubercles may represent the two extremely small teeth which the author of the species considered to lie "between the two margins."

Maxillae and Lip. Essentially as described for the male except, of course, there is no "cone-shaped projection" extending laterally from the maxillae as in the male (see Petrunkevitch's Fig. 22, p. 113 and my later comments concerning the male palp).

Sternum. Rather strongly raised; sternal suture procurved; with fairly prominent, large tubercles opposite coxae 1-3 and between fourth coxae; scutiform in general; almost as wide between first coxae as long; bluntly rounded between fourth coxae which are separated by about two thirds of their width.

Legs. 1243. Width of first patella at "knee" .15 mm., tibial index of first leg 9. Width of fourth patella at "knee" .13 mm., tibial index of fourth leg 12.

| | Femora | Patellae | Tibiae | Metatarsi | Tarsi | Totals |
|----|---------------------------|----------|--------|-----------|-------|--------|
| | (All measurements in mm.) | | | | | |
| 1. | 1.34 | .51 | 1.14 | 1.1 | .45 | 4.54 |
| 2. | 1.12 | .44 | .77 | .86 | .39 | 3.58 |
| 3. | .64 | .28 | .44 | .48 | .33 | 2.16 |
| 4. | 1.08 | .33 | .75 | .79 | .35 | 3.30 |

Spines are so slender that they may be termed spinules. Trichobothria observed on tibiae and metatarsi; apparently not restricted to one dorsal unit on metatarsi as stated by the author of the species with respect to the male.

Abdomen. Essentially as described for the male. Total length of abdomen 2.4; almost as tall as long and with the same width in the middle.

Epigynum. Rather distinctive; features best shown in Figures 1-3.

Color in alcohol. Carapace yellowish with two large white patches near the middle, made by sub-chitinous deposits; with the usual black pigment surrounding the eyes. Sternum bright reddish. Chelicerae a light reddish brown; other mouth parts about the same but with whitish margins. The legs are colored essentially as described for the holotype male, but I have noted minor variations; first, second and fourth tarsi are black; the third tarsus is black in the distal half, yellowish in the proximal half. The anterior tibiae have a black and red distal transverse band. The abdomen is basically white dorsally and dorsolaterally with multiple hieroglyphic-like lines and bars of many different shapes and lengths; all of these are in red contrasted to the black hieroglyphs described in the male holotype. A great variation in the abdominal color pattern has been noted among the numerous specimens now available for study. Some of these have the hieroglyphs almost devoid of color; others have them in a mixture of red and black; still others run largely to black or red; this would also be true for males as well as females; the venter is basically yellowish with a superimposed reddish tint increasing in degree toward the center.

Male. The structure described by the author of the species as a "cone-shaped projection directed outward and upward" from the lateral margin of the maxilla is a tooth which I assume to be used in co-operation with the chitinized ridge on the base of the palpal femur, a structure found in many male argiopids. The second femur has the proximal prolateral groove and ridge corresponding to the hook on the first coxa. The main features of the palp are shown in Figure 4.

It has also been noted that, in some males, the pedal stripes described as black in the holotype are sometimes red in certain individuals.

Collection records. The female selected for detailed description is from the Canal Zone Experiment Gardens, August 18, 1954. I also have numerous specimens of both sexes from the locality just cited as well as from the C. Z. Forest Preserve, Summit, Balboa, Madden Dam region, and Barro Colorado Island, all in the Canal Zone. I also have specimens from Arraijan, Chiva, and Boquete, all in the Republic of Panama. All of these collections were made during July and August, 1936, 1939, 1950, and 1954.

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